科学素养文库·科学元典丛书

计算机与人脑

The Computer and the Brain

[美] 冯·诺伊曼 著



彩色插图·超值珍藏

他是匈牙利一位犹太银行家的儿子，从小集“天才”和“全才”于一身。
他8岁掌握了微积分，12岁能读懂法国大数学家波雷尔的专著《函数论》；
他精通7种语言，6岁时能用希腊语同父亲闲谈，30岁时还能用英语背诵《双城记》；
他通晓历史，小学时就熟读德国历史学家翁肯的45卷巨著《通史》；
30岁时，他与时年54岁的爱因斯坦一起成为普林斯顿高等研究院第一批终身教授。
他就是20世纪杰出的数学家、经济学家、原子弹先驱、计算机之父——冯·诺伊曼！

Contents

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1914[illegible]Ladislas Ratz[illegible]M.Fekete[illegible]1886—1957[illegible]·[illegible]·[illegible]·[illegible]17[illegible]·[illegible]——20[illegible]——[illegible]

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1918[illegible]1919[illegible]3[illegible]·[illegible]Bela Kun[illegible]·[illegible]1919[illegible]8[illegible]

[illegible]·[illegible]1921[illegible]·[illegible]Eötvös[illegible]

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[illegible]1921—1926[illegible]

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1921[illegible]1925[illegible]·[illegible]1921[illegible]1923[illegible]1923[illegible]1925[illegible]1925[illegible]1922[illegible]E.Schmidt[illegible]1876—1959[illegible]H.Wey1[illegible]1885—1955[illegible]·[illegible]

[illegible]·[illegible]·[illegible]

[illegible]1921[illegible]1926[illegible]1926[illegible]·[illegible]

[illegible]·[illegible]1923[illegible]·[illegible]20[illegible]

[illegible]·[illegible]1908[illegible]E.Zermelo[illegible]1871—1953[illegible]A.Fraenkel[illegible]1891—1965[illegible]ZF[illegible]·[illegible]

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[illegible]1926—1930[illegible]

[illegible]·[illegible]1926[illegible]
[illegible]·[illegible]22[illegible]
[illegible]R.Courant[illegible]1888—1972[illegible]1926[illegible]·[illegible]
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1926[illegible]·[illegible]
[illegible]L.Nordheim[illegible]1926[illegible]
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[illegible]20[illegible]30[illegible]·[illegible]Pascual Jordan[illegible]
1902—1980[illegible]Garrett Birkhoff[illegible]1911—1996[illegible]
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[illegible]1930—1938[illegible]

20[illegible]20[illegible]
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[illegible]Arthur Holly
Compton[illegible]1892—1962[illegible]Oswald Veblen[illegible]1880—
1960[illegible]
[illegible]1929[illegible]10[illegible]·[illegible]“[illegible]”[illegible]

[illegible]1930[illegible]1933[illegible]1931[illegible]

[illegible]·[illegible]20[illegible]——[illegible]1928—1929[illegible]——[illegible]70[illegible]·[illegible]

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[illegible]·[illegible]·[illegible]Kovesi Mariette[illegible]1909 — [illegible]·[illegible]·[illegible]·[illegible]1930[illegible]·[illegible]1930[illegible]·[illegible]“[illegible]”[illegible]·[illegible]Marina von Neumann Whitman[illegible]1935— [illegible]1935[illegible]1937[illegible]

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1930[illegible]·[illegible]·[illegible]·[illegible]

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[illegible] 1930 [illegible] · [illegible] Kurt Gödel [illegible] 1906—1978 [illegible] · [illegible] · [illegible] · [illegible] · [illegible] · [illegible] 1940 [illegible]

[illegible] 1930 [illegible] Abraham Flexner [illegible] 1866—1959 [illegible] 13 [illegible] 14 [illegible] · [illegible]

1933 [illegible] 1 [illegible] · [illegible] —— [illegible] James Alexander [illegible] 1888—1971 [illegible] —— [illegible] 20 [illegible] 1933 [illegible] 1 [illegible] 30 [illegible] · [illegible] · [illegible] 1933 [illegible] 9 [illegible] 1955 [illegible]

1933 [illegible] · [illegible] 9 [illegible] 50 [illegible] · [illegible] M.Morse [illegible] 1892—1977 [illegible] 1934 [illegible] 9 [illegible] · [illegible] 30 [illegible]

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20[illegible]30[illegible]·[illegible]1933[illegible]

[illegible]1929[illegible]·[illegible]·[illegible]E.Noether[illegible]1882—1935[illegible]E.Artin[illegible]1898—1962[illegible]20[illegible]·[illegible]·[illegible]

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[illegible]·[illegible]1937[illegible]·[illegible]·[illegible]·[illegible]·[illegible]Vannevar Bush[illegible]1890—1974[illegible]·[illegible]·[illegible]·[illegible]

[illegible]·[illegible]S.Banach[illegible]1892—1945[illegible]S.M.Ulam[illegible]1909—1984[illegible]1937[illegible]·[illegible]

[illegible]1937[illegible]·[illegible]1938[illegible]·[illegible]“[illegible]”[illegible]·[illegible]·[illegible]·[illegible]·[illegible]Klara Dan[illegible] —1963[illegible]·[illegible]

[illegible]1939—1945[illegible]

[illegible]·[illegible]·[illegible]·[illegible]1938[illegible]Authur Neville Champerlain[illegible]1869—1940[illegible]1939[illegible]9[illegible]1[illegible]1941[illegible]12[illegible]

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1940[illegible]·[illegible]Oscar Morgenstern[illegible]1902—1977[illegible]1944[illegible]600[illegible]——[illegible]

[illegible]·[illegible]20[illegible]30[illegible]40[illegible]1940[illegible]

1941[illegible]12[illegible]·[illegible]1943[illegible]

[illegible]1943—1952[illegible]

20[illegible]“[illegible]”[illegible]·[illegible]

[illegible]20[illegible]30[illegible]10[illegible]

[illegible]1895[illegible]1945[illegible]50[illegible]“[illegible]”[illegible]

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1[illegible]1896[illegible]

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3[illegible]Ernest Rutherford[illegible]1871—1937[illegible]1920[illegible]

4[illegible]1932[illegible]James Chadwick[illegible]1891—1974[illegible]

5[illegible]1933[illegible]Szilard[illegible]

6[illegible]“[illegible]”[illegible]1938[illegible]

[illegible]1938[illegible]12[illegible]·[illegible]

7[illegible]Otto Hahn[illegible]1879—1968[illegible]235[illegible]239[illegible]

8[illegible]1942[illegible]12[illegible]235[illegible]

9[illegible]235[illegible]·[illegible]

10[illegible]1943[illegible]·[illegible]·[illegible]Robert Oppenheimer[illegible]1904—1967[illegible]·[illegible]·[illegible]——[illegible]·[illegible]

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□J.Mauchly□1907—1980□□□·□□□□□□□□□□□□□□□□□□□□□□□□□□□□
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[illegible]John McCarthy[illegible]1908—1957[illegible]1950[illegible]1949[illegible]“[illegible]”[illegible]·[illegible]·[illegible]·[illegible]

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[illegible]·[illegible]“[illegible]”[illegible]Edward Teller[illegible]1908—2004[illegible]6[illegible]——[illegible]1949[illegible]1950[illegible]1[illegible]·[illegible]1952[illegible]

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[illegible]·[illegible]F.J.Murray[illegible]1911—1996[illegible]1936[illegible]1943[illegible]“[illegible]Ⅰ[illegible]Ⅱ[illegible]Ⅲ[illegible]Ⅳ”[illegible]800[illegible]①[illegible]②[illegible]③[illegible]④[illegible]

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4[illegible]

[illegible]·[illegible]

①[illegible]1927[illegible]·[illegible]E.Cartan[illegible]1869—1951[illegible]·[illegible]

②[illegible]·[illegible]—[illegible]—[illegible]·[illegible]

[illegible]

1[illegible]

[illegible]·[illegible]1932[illegible]

1900[illegible]19[illegible]20[illegible]

[illegible]Max Planck[illegible]1859—1947[illegible]Albert Einstein[illegible]1879—1955[illegible]Niels Bohr[illegible]1885—1962[illegible]Max Born[illegible]1882—1970[illegible]Louis de Broglie[illegible]1892—1987[illegible]Werner Heisenberg[illegible]1901—1976[illegible]Erwin Schrodinger[illegible]1887—1961[illegible]Paul Dirac[illegible]1902—1984[illegible]Enrico Fermi[illegible]1901—1954[illegible]1900[illegible]1925[illegible]1900[illegible]1905[illegible]1913[illegible]

[illegible]1924[illegible]—[illegible]

$$\lambda = \frac{h}{p}$$

$$f = \frac{E}{h}$$

h

1925 1926

1926 ·

δ

·

①

②

1926 1924

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1932

·

“ ” David Bohm 1917—1992

· · “ ” “ ”

Charles Fefferman 1949—

·

1929

2

·

[illegible]·[illegible]

[illegible]·[illegible]1935[illegible]S.Chandrasekhar[illegible]1910—1995[illegible]1983[illegible]

[illegible]

[illegible]·[illegible]·[illegible]1926[illegible]1928[illegible]Shapley[illegible]

[illegible]19[illegible]70[illegible]Walras[illegible]Leon[illegible]1834—1910[illegible]·[illegible]1932[illegible]1938[illegible]1945[illegible]

[illegible]1928[illegible]·[illegible]——[illegible]

[illegible]·[illegible]1944[illegible]1947[illegible]1953[illegible]600[illegible]

[illegible]·[illegible]20[illegible]60[illegible]

[illegible]·[illegible]——[illegible]1994[illegible]2005[illegible]

[illegible]

[illegible]·[illegible]

1[illegible]

[illegible]·[illegible]·[illegible]·[illegible]·[illegible]20[illegible]60[illegible]

[illegible]1946[illegible]·[illegible]“[illegible]”[illegible]“[illegible]”[illegible]

[illegible]·[illegible]Monte-Carlo[illegible]1949[illegible]

[illegible]·[illegible]“[illegible]”[illegible]1954[illegible]1967[illegible]

[illegible]·[illegible]·[illegible]50[illegible]

2[illegible]

[illegible]ENIAC[illegible]·[illegible]·[illegible]

1946[illegible]·[illegible]

[illegible]1[illegible]

[illegible]2[illegible]

[illegible]3[illegible]1922[illegible]Lewis Fry Richardson[illegible]1881—1953[illegible]

[illegible]4[illegible]·[illegible]

1948[illegible]J[illegible]C Charney[illegible]1917—1981[illegible]1948[illegible]·[illegible]1949[illegible]1928[illegible]·[illegible]1950[illegible]4[illegible]ENIAC[illegible]1953

[illegible]MANIAC[illegible]·[illegible]
1954[illegible]

3[illegible]Numerical Analysis[illegible]

[illegible]

1946[illegible]·[illegible]S.Bergman[illegible]1898—1977[illegible]D.Montgomery[illegible]1909—1992[illegible]1947[illegible]·[illegible]Carl Friedrich Gauss[illegible]1777—1855[illegible]·[illegible]Ritz[illegible]1878—1909[illegible]·[illegible]

4[illegible]

[illegible]18[illegible]1945[illegible]·[illegible]“[illegible]”[illegible]1949[illegible]

[illegible]——[illegible]

5[illegible]

[illegible]·[illegible]·[illegible]·[illegible]“[illegible]”——[illegible]29[illegible]“[illegible]”[illegible]“[illegible]”[illegible]——[illegible]

[illegible]

[illegible]·[illegible]

20[illegible]20[illegible]·[illegible]·[illegible]

[illegible]·[illegible]·[illegible]①[illegible]②[illegible]③[illegible]④[illegible]

[illegible]·[illegible]·[illegible]·[illegible]“[illegible]”[illegible]·[illegible]50[illegible]“[illegible]”[illegible]·[illegible]

[illegible]1945[illegible]“[illegible]”[illegible]·[illegible]

[illegible]·[illegible]“[illegible]”[illegible]·[illegible]——[illegible]

[illegible]·[illegible]

[illegible]·[illegible]

[illegible]·[illegible]

[illegible]·[illegible]20[illegible]30[illegible]1945[illegible]1939[illegible]“[illegible]20[illegible]”[illegible]1939[illegible]

[illegible]·[illegible]21[illegible]·[illegible]·[illegible]·[illegible]1950[illegible]1954[illegible]·[illegible]·[illegible]

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